

A.O.SMITH

**WATER PRODUCTS
COMPANY**

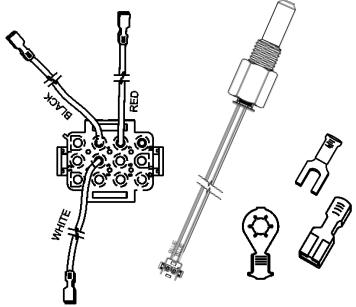
PSD-3-152/a

GAS

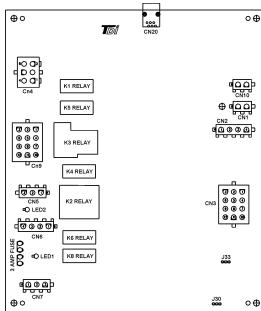
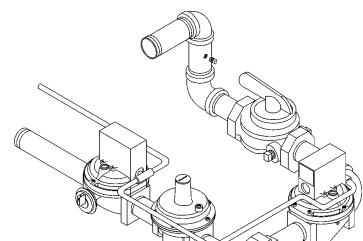
**COMMERCIAL POWER BURNER BOILER
REPLACEMENT PARTS LIST**

**COPPER BOILERS FOR HYDRONIC
HEATING & HOT WATER SUPPLY
LEGEND MODELS LB/LW: 1000
SERIES 300, 301**

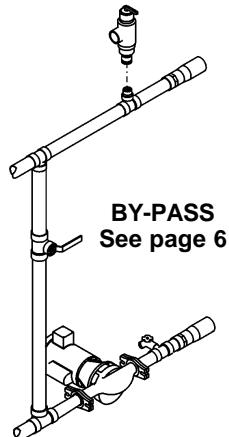
WIRING/HARNESS & PROBES
See page 8



PROPANE GAS TRAIN ASSEMBLY
See page 6

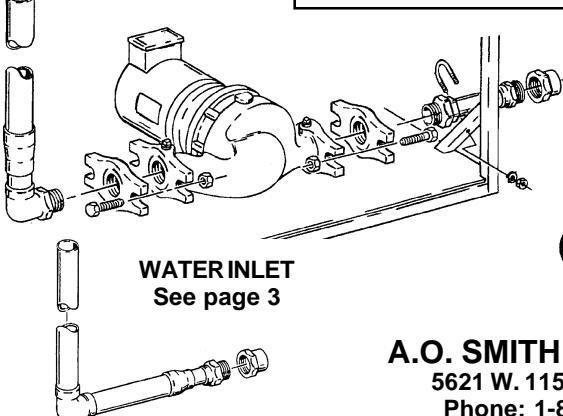
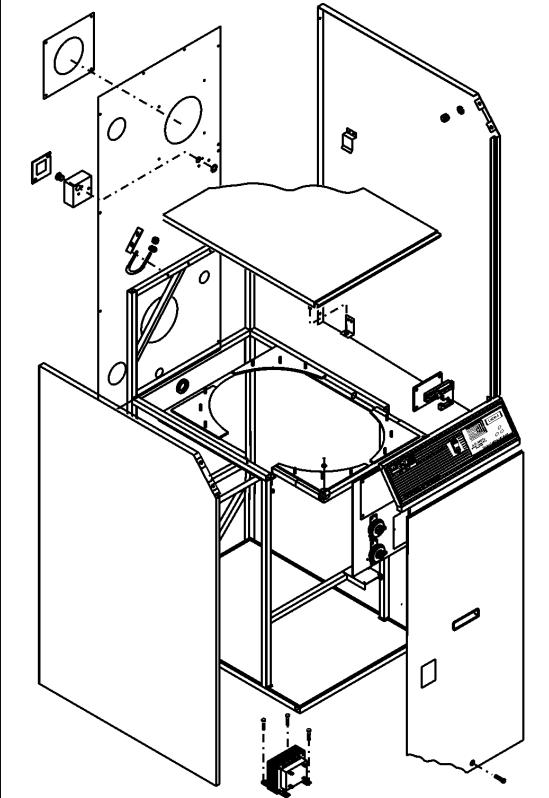


CONTROLBOARD
See page 7



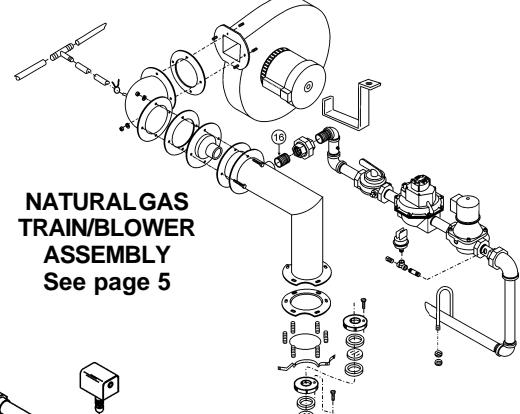
BY-PASS
See page 6

JACKET/FRAME ASSEMBLY
See page 4

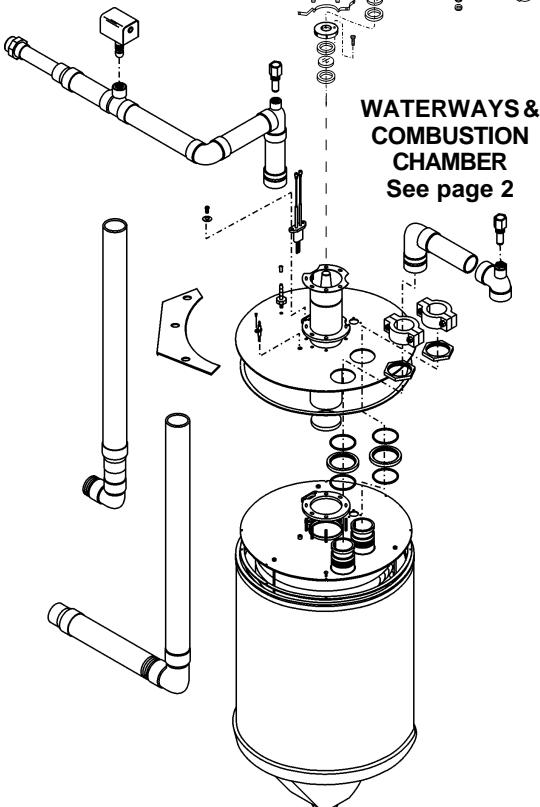


WATER INLET
See page 3

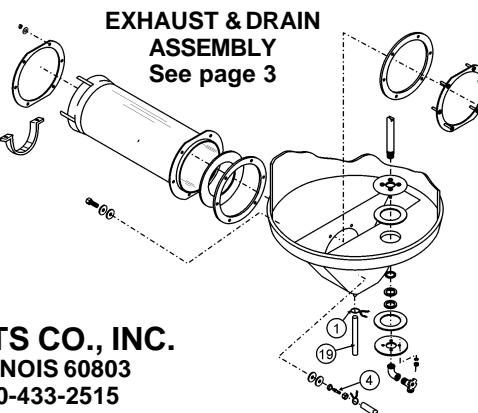
ProductPreservers®



**NATURAL GAS
TRAIN/BLOWER
ASSEMBLY**
See page 5



**WATERWAYS &
COMBUSTION
CHAMBER**
See page 2

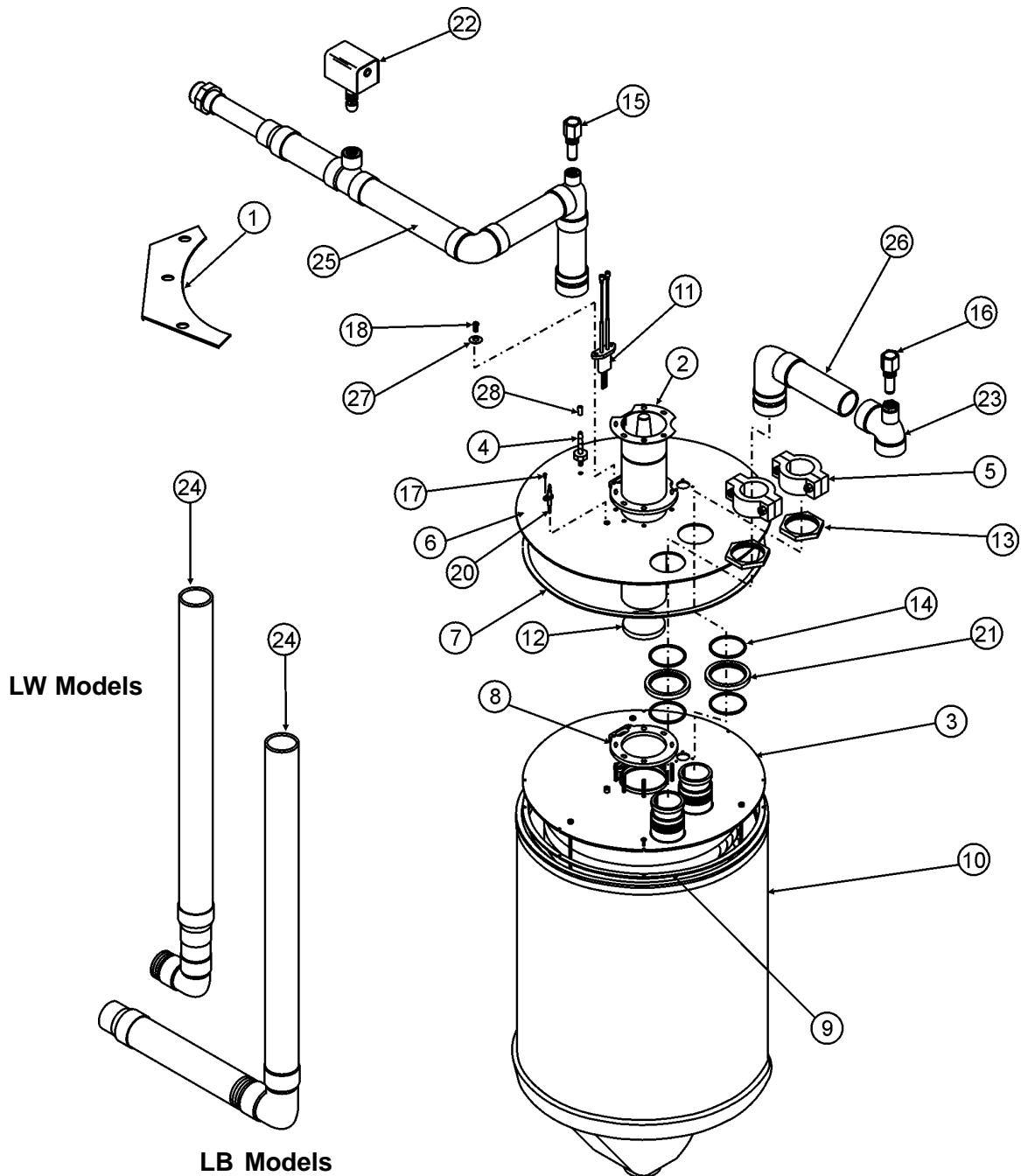


**EXHAUST & DRAIN
ASSEMBLY**
See page 3

A.O. SMITH WATER PRODUCTS CO., INC.
5621 W. 115TH STREET • ALSIP, ILLINOIS 60803
Phone: 1-800-433-2545 • Fax: 1-800-433-2515
Website: www.hotwater.com

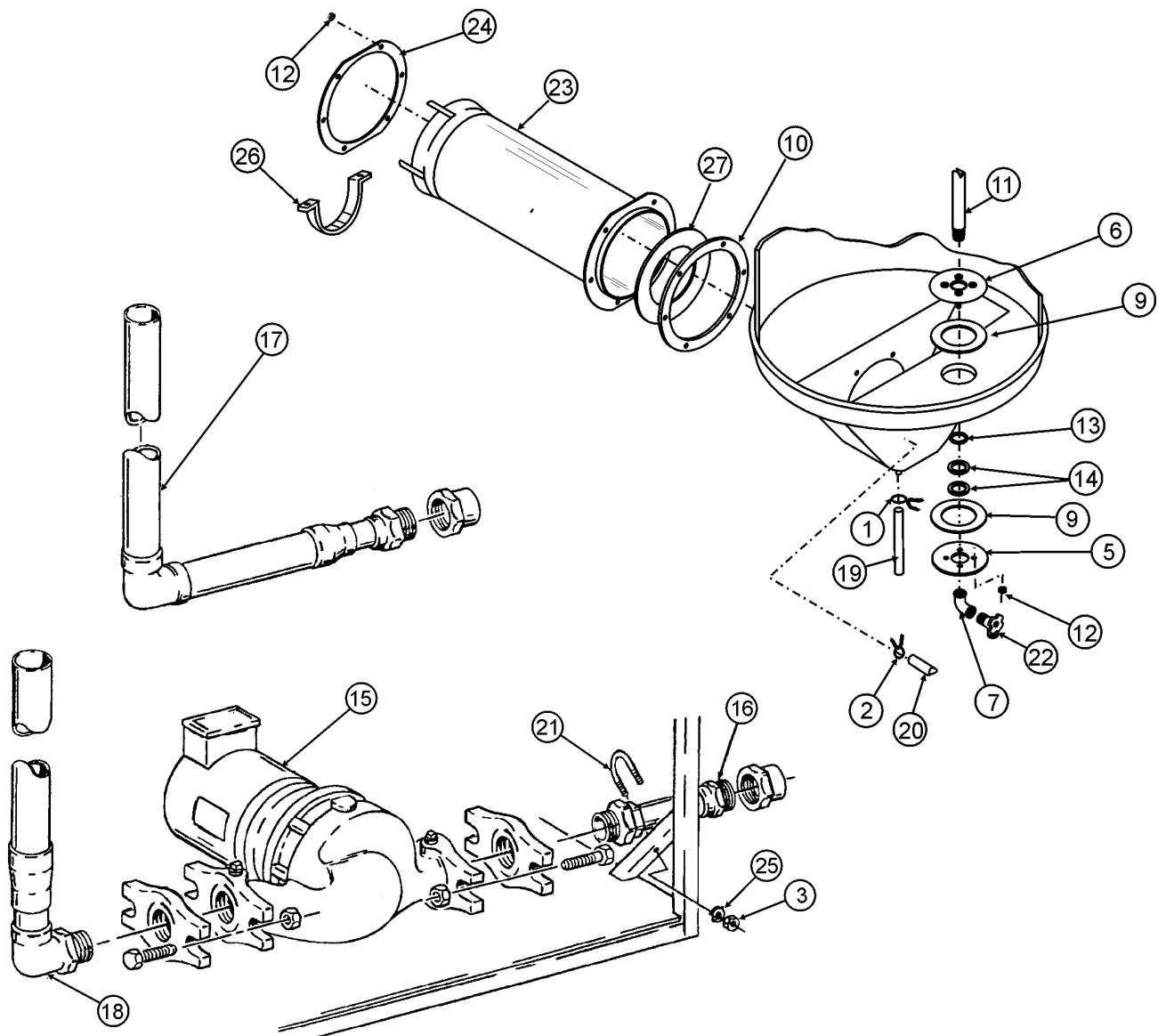
LB/LW WATERWAYS & COMBUSTION CHAMBER PARTS LIST

Item Description	Part Number	Item Description	Part Number
1..... Bracket	191602	16 Probe, Inlet Temp	<u>210571</u>
2..... Burner and Cone Assembly	191850-2	17 Screw, #8-32, 3/8" Long, SST	210444
3..... Combustion Chamber Asembly	211592	18 Screw, Machine #8-32, 1" Long, SST	191770
4..... Connector, Hose	191765	19 Sealer, Silicone (not shown)	191482-1
5..... Coupling, Flexible w/Gasket	191780-1	20 Sensor, Flame	<u>210421</u>
6..... Cover Outer	210404	21 Spacer Ring	191554-1
7..... Gasket, Outer	211594-1	22 Switch, Safety Flow	211480
8..... Gasket, Burner	191564-1	23 Tee Assembly	192387
9..... Gasket, Inner	211594	24 Tube Assembly, Primary (LW Models)	192388
10 Housing Assembly	211635-2	24 Tube Assembly, Primary (LB Models)	192225
11 Ignitor	192334	25 Tube Assembly, Outlet	210426
12 Insulation, Burner	191618	26 Tube Assembly, Secondary	192386
13 Nut, Manifold	191555-1	27 Washer, Flat #8 SST	191768
14 O-Ring	191556-2	28 Restrictor-Air, Top Cover	191926-1
15 Probe, Outlet Temp./ECO	<u>210572</u>		



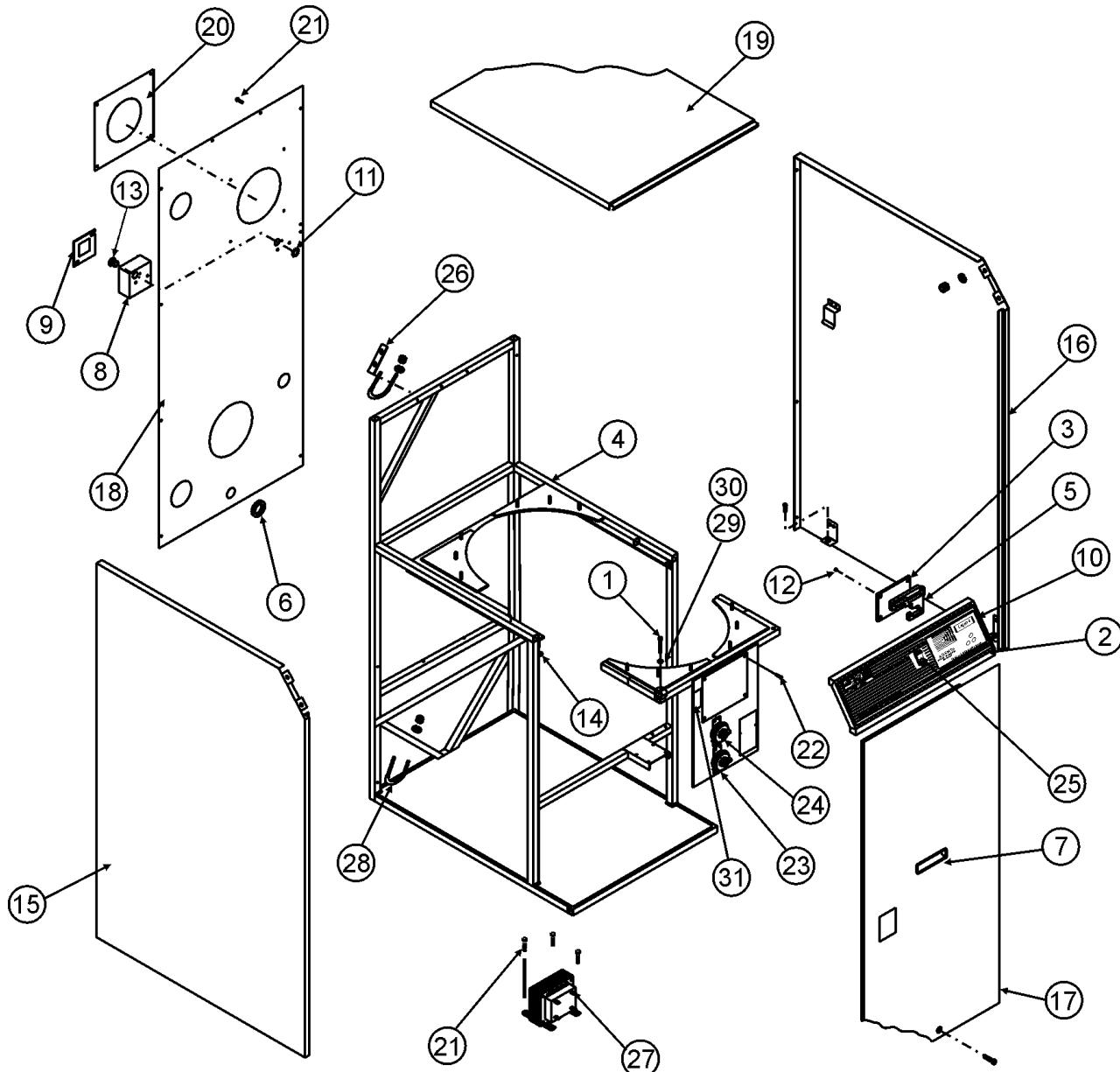
LB/LW EXHAUST, DRAIN & WATER INLET ASSEMBLY PARTS LIST

Item Description	Part Number	Item Description	Part Number
1 Clamp, Hose (Large)	191794-1	16 Tube Assembly, Inlet (LW Models)	192308
2 Clamp, Hose (Small)	191794-3	17 Tube Assembly, Primary (LB Models)	192225
3 Nut, Hex	191817-1	18 Tube Assembly, Primary (LW Models)	192388
5 Drain, Flange	191620	19 Tubing, Condensate	191746
6 Drain, Flange Assembly	191625	20 Tubing, Pressure	191562
7 Elbow	191664	21 U-Bolt Assembly	191938
9 Gasket, Drain	191622	22 Valve Drain	26273
10 Gasket, Vent	191683-1	23 Vent Assembly	210494
11 Nipple	20373-18	24 Vent Flange	191685-5
12 Nut, Hex 1/4" (Serrated)	210226	25 Washer, Plain	76820-18
13 O-Ring	191556-1	26 Vent Support, Bracket	192194
14 Plate, Drain Seal	191626	27 Vent, Restricting Ring (Series 301, LP) ..	191923-1
15 Pump Ass'y, Circulator (LW Models)	211538		



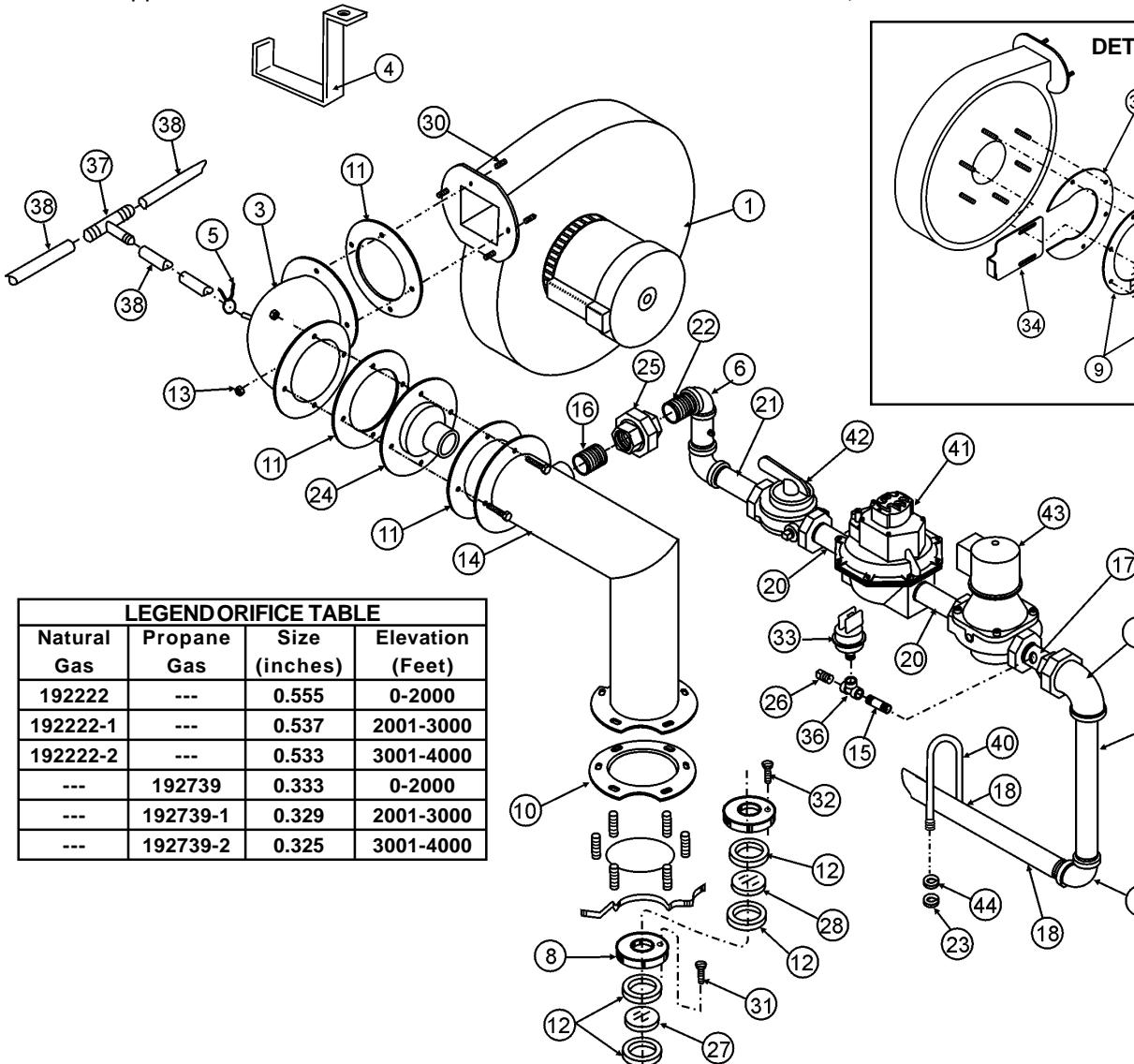
LB/LW JACKET/FRAME ASSEMBLY

Item	Description	Part No.	Item	Description	Part No.
1	Bolt Machine 5/16" - 18"	191358-2	17	Panel, Lower Front	191805-1
2	Control Panel Assembly	210601	18	Panel, Rear (Natural)	192191
3	Display Board	<u>210219</u>		Panel, Rear (Propane)	210020
4	Frame Assembly	210501-1	19	Panel, Top Cover	191609-1
5	Gasket, Display	210130	20	Plate, Rear Cover	210214
6	Grommet	97951	21	Screw, Hex Head 5/16"	210125
7	Handle	191802	22	Screw, Hex Head #6 -32	210206
8	Junction Box Assembly	190438-1	23	Switch, Blower Prover	<u>191666</u>
9	Junction Box Cover	2233	24	Switch, Blocked Flue	<u>191667</u>
10	Label, Control Panel	210561-1	25	Switch , Rocker	<u>191665-1</u>
11	Locknut, Star	1953	26	Support Bracket (Propane Only)	210017
12	Locknut #6 -32	210207	27	Transformer (100VA)	210449
13	Nipple, Chase	41994	28	U - Bolt Assembly (Waterway)	191938
14	Nut, Lock Hex 5/16" - 18"	97896	29	Washer, Flat	191359
15	Panel Assembly, Left Side	191796-3	30	Washer, Lock	191480
16	Panel Assembly, Right Side	191796-2	31	Switch, Relay	211546



LB/LW NATURAL GAS TRAIN/BLOWER ASSEMBLY

Item	Description	Part No.	Item	Description	Part No.
1	Blower	192195	23	Nut, Hex 1/4"	191817-1
2	Blower Adapter Assembly	192215-1	24	Orifice, Air (Series 300 - Nat. Gas)	192737-3
3	Blower Manifold Assembly	192217		Orifice, Air (Series 3011 - L.P. Gas)	192737-2
4	Bracket, Blower	210214	25	Orifice, Union	See Orifice Table Below
5	Clamp, Hose	191794-3	26	Plug, 1/8" Pipe	3348
6	Elbow, 1-1/4"	192216	27	Port, Observation Lower	191572
7	Elbow, Union 1-1/4"	86506-1	28	Port, Observation Upper	191572-1
8	Flange, Observation Port	191573	29	Screen, Air Inlet	192220-1
9	Gasket, Blower Air Inlet	192213	30	Screw, Cap 1/4"	190960-2
10	Gasket, Burner	191564	31	Screw, Flathead #8-32 x 1/2"	191542
11	Gasket, Manifold	191565	32	Screw, Flathead #8-32 x 3/4"	191542-1
12	Gasket, Port (1/8" Thick)	191576	33	Switch, Low Gas Pressure	191149-1
13	Nut, Hex 1/4", Serrated	210226	34	Shutter, Blower	192593
14	Manifold Assembly - Air/Gas	192309	35	Shutter Flange	192592
15	Nipple, Close 1/8"	191147-3	36	Tee, 1/8"	40119
16	Nipple, Close Stainless	191772-1	37	Tee, Pressure	191633
17	Nipple, Tapped	86505-3	38	Tubing, Pressure	191562
18	Nipple, 1-1/4" x 38 1/2"	86505-28	40	U-Bolt Assembly (Gas Train)	191938-3
19	Nipple, 1-1/4" x 28 3/4"	86505-27	41	Valve, Main Gas	78481-3
20	Nipple, 1-1/4" x 2"	86505	42	Valve, Firing	3423-3
21	Nipple, 1-1/4" x 3"	86505-2	43	Valve, Solenoid Gas	192189
22	Nipple, 1-1/4" x 4"	86505-6	44	Washer, Plain	76820-18

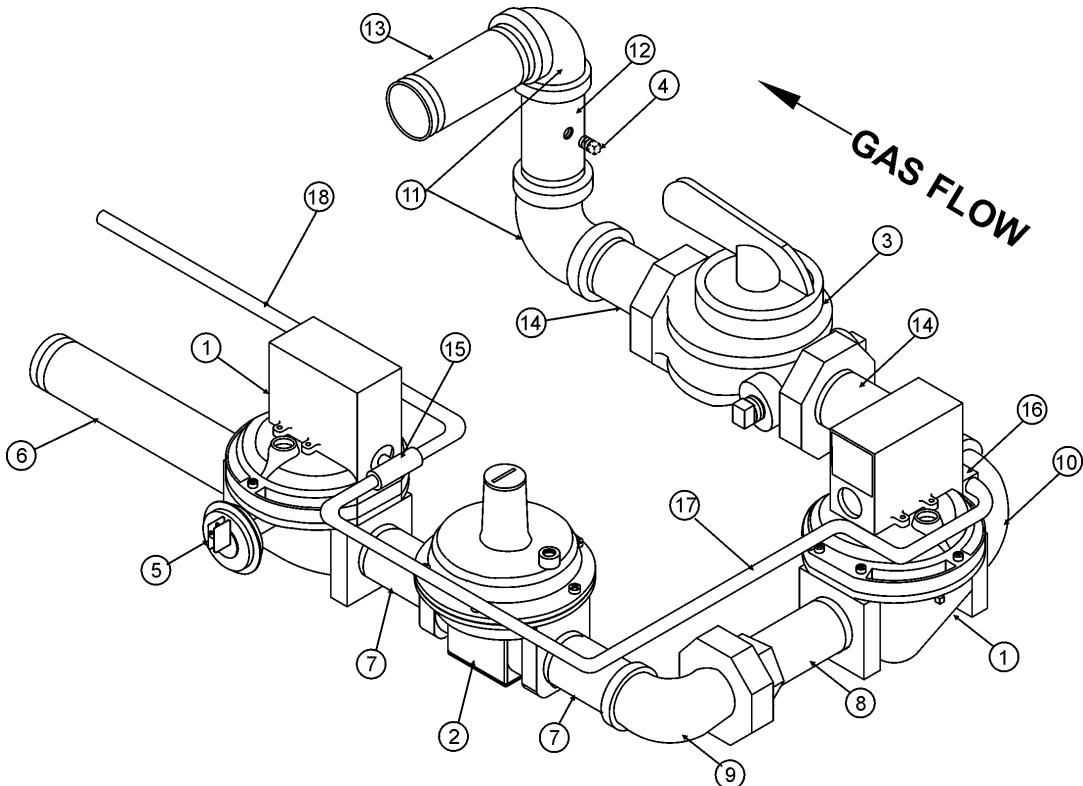


LEGEND ORIFICE TABLE

Natural Gas	Propane Gas	Size (inches)	Elevation (Feet)
192222	---	0.555	0-2000
192222-1	---	0.537	2001-3000
192222-2	---	0.533	3001-4000
---	192739	0.333	0-2000
---	192739-1	0.329	2001-3000
---	192739-2	0.325	3001-4000

LB/LW PROPANE GAS TRAIN ASSEMBLY

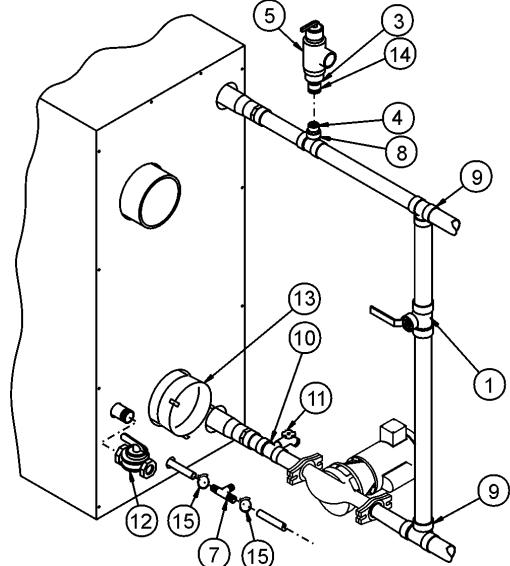
Item Description	Part No.	Item Description	Part No.
1 Valve, Main Gas, LP 300 Series	77780	10 Elbow, 90 Street 1-1/4"	94516
2 Regulator, LP 301 Series	192460	11 Elbow, 90 1-1/4"	192216
3 Valve, Firing	3423-3	12 Nipple, 1-1/4" w/Tapping	86505-32
4 Pipe Plug	3348	13 Nipple, 1-1/4"	86505-6
5 Switch, Low Gas Pressure	191149-3	14 Nipple, 1-1/4"	86505-4
6 Nipple, 1-1/4"	86505-13	15 Tee, 1/8" NPT Branch	192465
7 Nipple, 1-1/4"	86505-2	16 Connector, Angle 1/8"	1578
8 Nipple, 1-1/4"	86505-17	17 Bleeder, Tube	210016
9 Elbow, Union 1-1/4"	86506	18 Bleeder, Tube	192461



LB/LW BY-PASS PARTS LIST

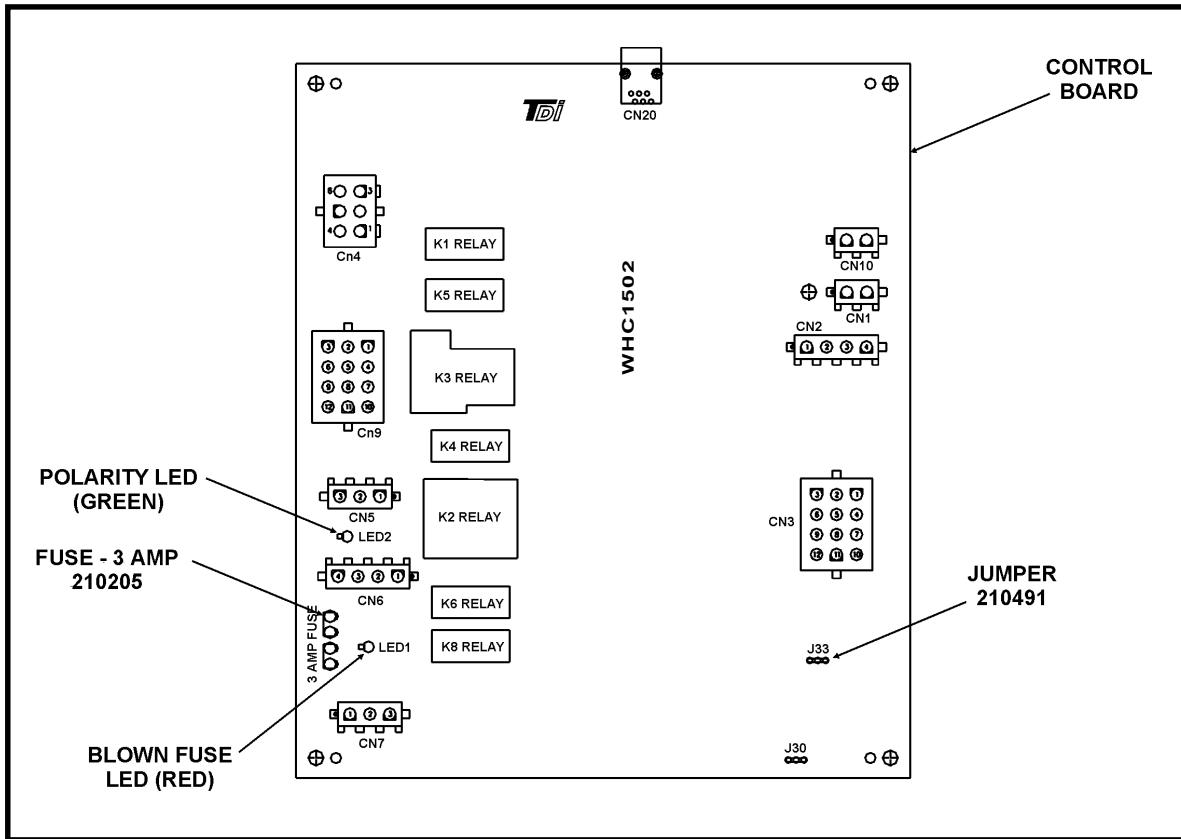
On LB models the circulating pump must be between the boiler inlet and the bypass (see figure below). LW models have pump mounted inside the jacket.

Item	Description	Part No.
1	Ball Valve	191935
2	Tank/Pump Kit (LW Models Only - Not Shown)	210625
3	Hex Reducing Bushing (LB Only)	91940-8
4	Flush Bushing (LB Only)	192163-2
5	Relief Valve (LW Model)	98883-3
	Relief Valve (LB Model)	210451-2
6	Strap, Cable (not shown)	99592-2
7	Tee, Condensate	192040-1
8	Tee (For use w/relief valve): LW Model	78685-4
	LB Model	191584
9	Tee 2"x2"x2"	191584
10	Tee 2"x2"x3/4"	78685-4
11	Valve, Drain	26273
12	Valve, Manual Shutoff	3423-3
13	Vent Patch Assembly	192161
14	Nipple (For use w/relief valve) LW Model	20373-12
	LB Model	92706-4
15	Clamp, Hose	191794-1



LB/LW CONTROL BOARD WHC 1502

Part Number 210128



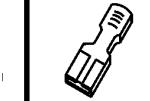
LB/LW 1000 WIRING CHART

COLOR	GAUGE	PART NUMBER ***
White	14	41974
Black	14	99650
Green	14	41972
White	16	86580
Black	16	86578
Green	16	69058
White	18	170595
Black	18	170596
Green	18	170606
Blue	18	191719
Red	18	170603
Yellow	18	170604
Brown	18	170890
White/Red	18	191700
White/Yellow	18	191702
White/Black	18	191699
Black/White	18	191694
Yellow/Blue	18	191708
Red/Green	18	191717

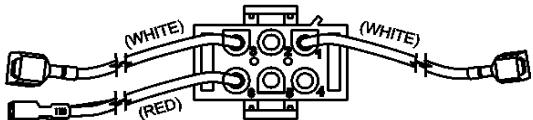
*** Use dash number to indicate length of wire.

Example: 20 inch long red wire would be expressed as 170603-20.

WIRING AND HARNESS ASSEMBLY

78468	99593-6	78469	191673	42573	210091	210152	99599-2
							

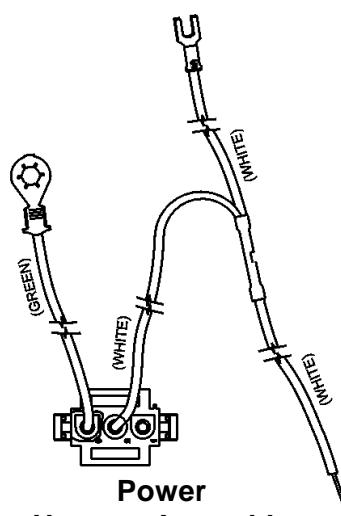
22-16 Ga. 16-14 Ga. 22-18 Ga. #10 Stud 22-18 Ga.



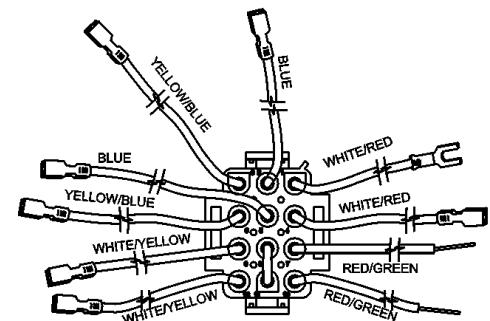
**Ignition
Harness Assembly
210575**



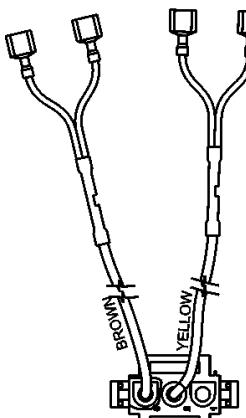
**Tank Probe
Harness Assembly
210604**



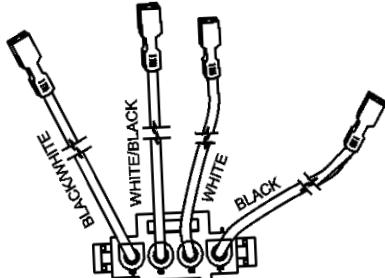
**Power
Harness Assembly
210579-1**



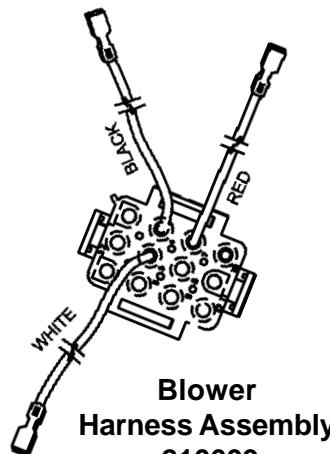
**Pressure Flow Switch
Harness Assembly
210576**



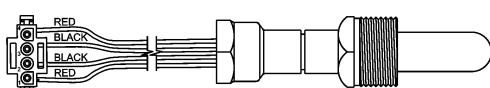
**Gas Valve
Harness Assembly
210574-1 (Propane)**



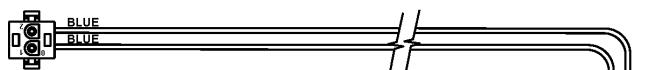
**Transformer
Harness Assembly
210578**



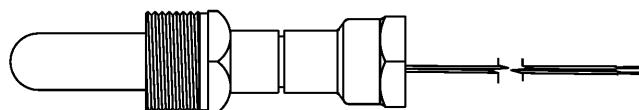
**Blower
Harness Assembly
210609**



**Outlet Temperature
Control/ ECO Assembly
210572**



**Inlet Temperature
Control Assembly
210571**



**Tank Probe (LW Models)
211541-1**